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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JENS HIRSCHFELD, GERALD SCHULLER, MANFRED LUTZKY, ULRICH KRAEMER, and STEFAN WABNIK

Appeal 2016-002230
Application 12/300,602
Technology Center 2600

Before ERIC B. CHEN, ADAM J. PYONIN, and SHARON FENICK, *Administrative Patent Judges*.

PYONIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–4, 6–22, 24–26, 28–42, and 44–47.[1] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] Claims 23 and 43 have been canceled; the Examiner finds claims 5, 27, 48, and 49 contain allowable subject matter. *See* App. Br. 37, 45; Final Act. 29–30.

STATEMENT OF THE CASE

Introduction

The Application "relates to information signal encoding, such as audio or video encoding." Spec. ¶ 1:13–14. Claims 1, 24, 44, 45, 46, and 47 are independent and before us. Claim 1 is reproduced below for reference:

> 1. An apparatus for encoding an information signal into an encoded information signal, comprising:
>
> a determiner configured to determine a representation of a psycho-perceptibility motivated threshold, which indicates a portion of the information signal irrelevant with regard to perceptibility, by using a perceptual model;
>
> a filter configured to filter the information signal so as to normalize the information signal with regard to the psycho-perceptibility motivated threshold by filtering the information signal with a transfer function approximating an inverse of the psycho-perceptibility motivated threshold, thereby attaining a prefiltered signal;
>
> a predictor configured to predict the prefiltered signal in a forward-adaptive manner to attain a predicted signal, a prediction error for the prefiltered signal and a representation of prediction coefficients, based on which the prefiltered signal can be reconstructed; and

References and Rejections

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Gupta	US 4,751,736	June 14, 1988
Davis	US 5,699,484	Dec. 16, 1997
Son	US 2004/0230429 A1	Nov. 18, 2004

PERCEPTUAL AUDIO CODING USING ADAPTIVE PRE- AND POSTFILTERS AND LOSSLESS COMPRESSION; Gerald D. T. Schuller et. al., IEEE Transactions On Speech and Audio Processing, Vol. 10, No. 6, Sept. 2002 (hereinafter, "Schuller").

EVALUATION OF A WARPED LINEAR PREDICTIVE CODING SCHEME; Aki Harma; IEEE, 2000 (hereinafter, "Harma").

apt-X100: Low-Delay, Low-Bit-Rate Subband ADPCM Digital Audio Coding; Fred Wylie; Collected Papers on Digital Audio Bit-Rate Reduction; Manuscript received 1995 (hereinafter, "Wylie").

Claims 1, 2, 8–10, 15–18, 44, and 46 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis and Schuller. Final Act. 6.

Claims 3, 4, 6, 7, 11, 12, 19, 20 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, and Gupta. Final Act. 12.

Claims 13 and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, and Harma. Final Act. 15.

Claims 14 and 22 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, and Son. Final Act. 16.

Claims 24, 30–33, 36–40, 45, and 47 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, and Wylie. Final Act. 18.

Claims 25, 26, 28, and 29 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, and Gupta. Final Act. 24.

Claims 34 and 41 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, Wylie, and Harma. Final Act. 26.

Claims 35 and 42 stand rejected under 35 U.S.C. § 103(a) as being obvious over Davis, Schuller, Wylie, and Son. Final Act. 28.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments. Appellants do not separately argue the claims; we select claim 1

as representative. *See* App. Br. 24–28; *see also* 37 C.F.R. § 41.37(c)(1)(iv). We adopt the Examiner's findings and conclusions (*see* Final Act. 2–29; Advisory Act. 2; Ans. 25–29) as our own, and we add the following primarily for emphasis.

Appellants argue the Examiner's rejection of claim 1 is in error, because "[n]either Davis nor Schuller suggests performing a first-stage filtering with the inverse of a psycho-perceptibility motivated threshold followed by a forward-adaptive filtering before the quantization. This is true with respect to both, Davis and Schuller." App. Br. 26. Appellants further argue that one skilled in the art would not combine Davis with Schuller, because "to tie the subband-filtering of Davis immediately downstream the prefilter of Schuller" would "contravene the whole concept of Schuller." *Id.* at 27.

We are not persuaded the Examiner erred. We agree with the Examiner that Appellants' arguments fail to address the Examiner's findings. *See* Ans. 26. Here, the Examiner correctly finds "Davis is directed towards an audio coding system which applies some type of filtering in pre-processing prior to linear prediction and quantization," and one of ordinary skill would modify Davis "to incorporate the filtering of Schuller to provide pre-filtering having a transfer function that matches the inverse of the estimated masked threshold from the psychoacoustic model." Advisory Act. 2; *see also* Final Act. 7–9; Davis Fig. 3; Schuller 380–381. Appellants' argument, that neither reference teaches or suggests the claim limitations (*see* App. Br. 26), does not persuade us the Examiner's *combination* of cited references fails to teach or suggest the limitations. *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *cf. KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398,

402 (2007) ("[i]t is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle").

Further, Appellants do not persuade us the Examiner erred in finding one of ordinary skill would combine Davis and Schuller in the manner claimed. The Examiner finds Davis discloses a filter which "may be implemented by essentially any transform" (Final Act. 7, citing Davis 6:56–59), and the combination of Davis and Schuller "provides the benefit (to Davis) of further filtering out unnecessary information undetectable by the human ear and avoiding transform coding pitfalls, thus motivating one of ordinary skill in the art to make the combination" (Ans. 29, citing Schuller 380). *See* Final Act. 3. Appellants' arguments bodily incorporate into Davis teachings of Schuller that are not relied upon by the Examiner, and Appellants do not persuasively show the Examiner erred in finding one of skill in the art would use Schuller's particular filter transfer function in the system of Davis. *See* Final Act. 7–9. The artisan is not compelled to blindly follow every teaching of a prior art reference without the exercise of independent judgment. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984).[2]

In the Reply Brief, Appellants present new arguments regarding the Examiner's combination, and assert "[i]t is further respectfully noted that the

[2] S*ee also In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983) ("it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review"); *see also In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973) ("[c]ombining the *teachings* of references does not involve an ability to combine their specific structures"); *cf KSR*, 550 U.S. at 421 ("[a] person of ordinary skill is also a person of ordinary creativity, not an automaton").

just outlined argumentation also addresses the Examiner's concerns . . . . That is, Davis has been discussed as the 'primary reference' while Schuller has been treated as a source . . . to modify the teaching of Davis." Reply Br. 8. Appellants' new arguments, however, could have been raised in the opening brief. *See, e.g.,* Final Act. 4 ("one of ordinary skill in the art would have been motivated to add the pre-processing filter of Schuller into the system of Davis"); Advisory Act. 2 ("applicants' arguments appear to be coming from a perspective of the modification of the teachings of Schuller with the sub-band filtering of Davis," which is "in contradiction with the applied rejection . . . which modifies the components/functionality of Davis by incorporating the pre-filter of Schuller"). Appellants' Reply Brief arguments are waived because they were not presented in the opening brief and no showing of good cause was made to explain why the late argument should be considered by the Board. *Optivus Technology, Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (argument raised for the first time in the Reply Brief that could have been raised in the opening brief is waived); *see also* 37 C.F.R. § 41.41(b)(2).

Accordingly, we are not persuaded the Examiner's rejection of independent claim 1 is in error.

DECISION

The Examiner's rejection of claims 1–4, 6–22, 24–26, 28–42, and 44–47 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED